According to an embodiment of the present invention, the water and the first gaseous or vapor phase composition are reacted in the substantial absence of an unreactive carrier gas. Preferably, the first and the second gaseous or vapor phase compositions are obtained by separately heating, under pressure, the first and second compositions, each contained as pure liquid in a respective supply tank.

C1

Page 6, lines 11-23, amend the paragraph, as follows:

According to a preferred embodiment of the present invention, the first and the second gaseous or vapor phase compositions are supplied at a predetermined temperature to the chamber, said predetermined temperature being a temperature at which the hydrolysis reaction between the two compositions is substantially incomplete. With the expression "substantially incomplete hydrolysis reaction," it is intended that the dimension of the silica particles produced by the reaction is sufficiently small in order to allow being transported by the gas stream without giving rise to unwanted deposition of material at the inlet of the reaction chamber, as observed in prior-art processes. In particular, said predetermined temperature is about 800 °C or lower, preferably from about 600 °C to about 750 °C, a temperature of about 700 °C being particularly preferred.

C2

Page 7, lines 7-10, amend the paragraph, as follows:

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HENDERSON
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DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
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C3

- a reaction chamber in which the gaseous or vapor phase water and the first gaseous or vapor phase composition are reacted to form an aerosol of glass, said reaction chamber being provided with an outlet through which the aerosol of glass is directed toward the target;

Page 12, line 15 - page 13, line 4, amend the paragraph, as follows:

C4

As shown in detail in Figs. 4 and 5, each element of the injection system comprises an injection chamber 34, wherein a first tubular member 51 is disposed inside a second tubular member 50. The tubular member 51 is provided with an inlet 52 through which the gaseous reactant is fed and is closed at the opposite end, while the tubular member 50 is closed at both ends. The tubular member 50 is provided with an elongated nozzle 41 for injecting the gaseous reactants into the reactor chamber. Said nozzle has preferably an elongated cross-section, with an elongated rectangular opening through which reactants are fed into the reaction chamber. The tubular member 51 is provided, on its upper half, with a series of holes 54. In order to provide flow uniformity, the dimensions of holes 54 preferably decrease from the inlet towards the opposite end of the tube. Said holes are disposed asymmetrically with respect to the axial direction of the injection system. As shown in Fig. 4, the axes "a" of the holes 54 preferably form an angle $\beta$ with the axis "b" of the nozzle, which is from about 30 to about 60 degrees. When the gaseous reactant is fed through the inlet 52, it flows along the inner tubular member 51 and then, through holes 54, into the tubular member 50, from which it is injected, through nozzle 41, into the reactor chamber.

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1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
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Page 13, lines 5-10, amend the paragraph, as follows:

C5

The dimension of holes 54, located in the tubular member 51, are selected in order to impart uniformity to the flow entering the first tubular member. For instance, their diameter may be gradually reduced, from about 2 mm close to the inlet of gas to about 1 mm at the opposite end. However, different dimensions and arrangements can be used, depending on the specific process parameters.

Page 22, line 13 - page 23, line 4, amend the paragraph, as follows:

C6

The combination of these two temperature gradients causes the stream of gas and particles to be confined in the central part of the reactor, avoiding deposition on the perimeter walls of it. As a matter of fact, the soot/gas stream being transported towards the deposition target tends to increase its temperature (from an initial temperature of, for example, 700 °C), as a consequence of the heating generated by the exothermic hydrolysis reaction and by the heating elements. If the temperature of the inner walls of the reactor chamber is kept constant along its whole length (e.g., at about 1000 °C), it may happen that the glass particles reach temperatures comparable to those of the reactor's walls, with possible deposition of said particles onto said walls. If the inner walls of the reactor are instead subjected to a controlled longitudinal thermal gradient (e.g., with a temperature variation from about 1200 °C to about 1600 °C), the particles transported in the stream will encounter subsequent zones of the reactor wherein the transversal gradient is suitably set in order to have a temperature of the wall substantially higher than the

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HENDERSON
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GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com